

Claims

1. Blends containing polycarbonate and/or polyester carbonate, graft polymer, phosphonate amine and inorganic powder having an average particle diameter smaller than or equal to 200 nm.

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2. Blends according to claim 1, containing from 0.1 to 30 parts by weight phosphonate amine of the formula (I)

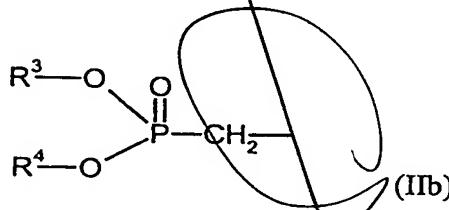
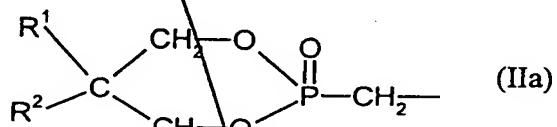
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 $A_{3-y} \cdot N \cdot B_y$ 

(I)

in which

A stands for a radical of the formula (IIa)



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$R^1$  and  $R^2$  stand independently of one another for unsubstituted or substituted  $C_1-C_{10}$ -alkyl or for unsubstituted or substituted  $C_6-C_{10}$ -aryl,

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$R^3$  and  $R^4$  stand independently of one another for unsubstituted or substituted  $C_1-C_{10}$ -alkyl or for unsubstituted or substituted  $C_6-C_{10}$ -aryl, or

$R^3$  and  $R^4$  stand together for unsubstituted or substituted  $C_3-C_{10}$ -alkylene,

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$y$  denotes the numerical values 0, 1 or 2, and

B stands independently for hydrogen, optionally halogenated C<sub>2</sub>-C<sub>8</sub>-alkyl, unsubstituted or substituted C<sub>6</sub>-C<sub>10</sub>-aryl,

5 and from 0.5 to 40 parts by weight finely divided inorganic powder, wherein the quantities indicated are in relation to the total mixture.

3. Blends according to claims 1 to 2 containing

10 A) from 40 to 99 parts by weight aromatic polycarbonate and/or polyester carbonate,

B) from 0.5 to 60 parts by weight graft polymer prepared from

15 B.1) from 5 to 95 wt.% of one or more vinyl monomers on

B.2) from 95 to 5 wt.% of one or more graft backbones having a glass transition temperature < 10°C,

20 C) from 0 to 45 parts by weight of at least one thermoplastic polymer selected from the group comprising vinyl (co)polymers and polyalkylene terephthalates,

25 D) from 0.1 to 30 parts by weight of a phosphonate amine of the general formula (I) according to claim 2,

E) from 0.5 to 40 parts by weight of finely divided inorganic powder having an average particle diameter smaller than or equal to 200 nm, and

30 F) from 0 to 5 parts by weight of a fluorinated polyolefin,

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wherein the sum of the parts by weight of all the blend components is 100.

4. Blends according to any of claims 1 to 3, containing  
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from 60 to 98.5 parts by weight of A,  
from 1 to 40 parts by weight of B,  
from 0 to 30 parts by weight of C,  
from 1 to 25 parts by weight of D,  
10 from 1 to 25 parts by weight of E,  
from 0.15 to 1 part by weight of F.
- 15 5. Blends according to any of claims 1 to 4, containing from 2 to 25 parts by weight of C.
- 15 6. Blends according to any of claims 1 to 5, containing from 2 to 20 parts by weight of D.
- 20 7. Blends according to any of the preceding claims, wherein vinyl monomers B.1 are mixtures prepared from  
B.1.1 from 50 to 99 parts by weight vinyl aromatics and/or vinyl aromatics substituted in the ring and/or methacrylic acid ( $C_1$ - $C_8$ )-alkyl esters and  
25 B.1.2 from 1 to 50 parts by weight vinyl cyanides and/or (meth)acrylic acid ( $C_1$ - $C_8$ )-alkyl esters and/or derivatives of unsaturated carboxylic acids.
- 30 8. Blends according to any of the preceding claims, wherein the graft backbone is selected from at least one rubber in the group comprising diene

rubbers, EP(D)M rubbers, acrylic, polyurethane, silicone, chloroprene and ethylene/vinyl acetate rubbers.

9. Blends according to any of the preceding claims, wherein the component D is selected from the group comprising 5,5,5',5',5",5"-hexamethyl-tris(1,3,2-dioxaphosphorinane-2-methanamine, 1,3,2-dioxaphosphorinane-2-yl)methyl]-5,5-dimethyl-, N-butyl-N[(5,5-dimethyl-1,3,2-dioxaphosphorinane-2-methanamine, N-[(5,5-dimethyl-1,3,2-dioxaphosphorinane-2-yl)methyl]-5,5-dimethyl-N-phenyl-, 1,3,2-dioxaphosphorinane-2-methanamine, N,N-dibutyl-5,5-dimethyl-, 2-oxide; 1,3,2-dioxaphosphorinane-2-methanimine, N-[(5,5-dimethyl-1,3,2-dioxaphosphorinane-2-yl)methyl]-N-ethyl-5,5-dimethyl-, P,2-dioxide; 1,3,2-dioxaphosphorinane-2-methanamine, N-butyl-N-[(5,5-dichloromethyl-1,3,2-dioxaphosphorinane-2-yl)methyl]-5,5-dichloromethyl-, P,2-dioxide; 1,3,2-dioxaphosphorinane-2-methanamine, N-[(5,5-dichloromethyl-1,3,2-dioxaphosphorinane-2-yl)-methyl]-5,5-di-chloromethyl -N-phenyl-, P,2-dioxide; 1,3,2-dioxaphosphorinane-2-methanamine, N,N-di-(4-chlorobutyl)-5,5-dimethyl-2-oxides; 1,3,2-dioxaphosphorinane-2-methanimine, N-[(5,5-dimethyl-1,3,2-dioxaphosphorinane-2-yl)methane]-N-(2-chloroethyl)-5,5-di(chloromethyl)-, P2-dioxide.

10. Blends according to any of the preceding claims, wherein the component E is selected from at least one polar compound of one or more metals of the 1st to the 5th main groups or the 1st to 8th sub-groups of the Periodic Table, with at least one element selected from among oxygen, hydrogen, sulfur, phosphorus, boron, carbon, nitrogen and silicon.

11. Blends according to claim 10, wherein the component E is selected from at least one polar compound of one or more metals of the 2nd to 5th main groups or the 4th to 8th sub-groups of the Periodic Table, with at least one

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element selected from among oxygen, hydrogen, sulfur, phosphorus, boron, carbon, nitrogen and silicon.

12. Blends according to claim 11, wherein the component E is selected from at least one polar compound of one or more metals of the 3rd to 5th main groups or the 4th to 8th sub-groups of the Periodic Table, with at least one element selected from among oxygen, hydrogen, sulfur, phosphorus, boron, carbon, nitrogen and silicon.

10 13. Blends according to any of the preceding claims, wherein the component E is selected from at least one oxide, hydroxide, hydrated oxide, sulfate, sulfite, sulfide, carbonate, carbide, nitrate, nitrite, nitride, borate, silicate, phosphate, hydride, phosphite and phosphonate.

15 14. Blends according to any of the preceding claims, wherein the component E is selected from among oxides, phosphates and hydroxides.

20 15. Blends according to any of the preceding claims, wherein the component E is selected from among  $TiO_2$ ,  $SiO_2$ ,  $SnO_2$ ,  $ZnO$ ,  $ZnS$ , boehmite,  $ZrO_2$ ,  $Al_2O_3$ , aluminium phosphates, iron oxides,  $TiN$ ,  $WC$ ,  $AlO(OH)$ ,  $Sb_2O_3$ ,  $NaSO_4$ , vanadium oxides, zinc borate, silicates such as aluminium silicates, magnesium silicates, one-, two- and three-dimensional silicates, mixtures and doped compounds thereof.

25 16. Blends according to any of the preceding claims, wherein the component E is selected from among hydrate-containing aluminium oxides,  $TiO_2$  and mixtures thereof.

30 17. Blends according to any of the preceding claims, containing at least one additive selected from the group comprising lubricants and mould release agents, nucleating agents, antistatic agents, stabilisers, dyes and pigments.

18. Blends according to any of the preceding claims, containing further flame retardants different from the component D.

5 19. Process for the preparation of moulding compositions according to any of claims 1 to 18, wherein the components A to E and optionally further additives are mixed and melt-compounded.

10 20. Use of the moulding compositions according to any of claims 1 to 18 for the production of moulded bodies.

21. Moulded bodies obtainable from moulding compositions according to any of claims 1 to 18.

22. Housing components according to claim 21.

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